REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow.

I. Claim Rejections – 35 U.S.C. 102

In the Final Office Action of November 24, 2009, the rejection of claims 11, 16, 20, and 22 under 35 U.S.C. § 102(b) was maintained. In maintaining the rejection, the Examiner repeated the reasons of rejection previously asserted in the May 27, 2009 Non-final Office Action. (*See,* pages 3-9 of the Final Office Action and pages 3-9 of the May 27, 2009 Office Action). Applicant traverses the rejection for the reasons set forth below.

In Applicant's August 25, 2009 Reply to the May 27, 2009 Office Action, Applicant argued against the position that Keyes et al. anticipates each and every limitation recited in claims 11, 16, 20, and 22. In Applicant's reply and hereinafter, remarks were/are primarily focused on the rejections of the independent claims (i.e., 11 and 20) outlined in the Office Action with the understanding that the dependent claims that depend from the independent claims are patentable for at least the same reasons (and other reasons) that the independent claims are patentable. Applicant continues to reserve the right to argue the patentability of the dependent claims separately in any future proceedings. To briefly summarize the August 25, 2009 Reply, Applicant argued:

> Keyes et al. fails to teach or suggest "constructing a first mathematical model..." and "constructing a second mathematical model for use with loans for which at least some of the loan data for the set of explanatory variables is not available;"
>
> Keyes et al. is explicitly limited to considering merely risk assessment of a borrower;
>
> Keyes et al. does not suggest the specific steps for creating the second mathematical model based on outputs of the first mathematical model as recited in, e.g., independent claim 11;

Keyes et al. fails to disclose any "error values" that are stored an indicative of errors, such as described in independent claim 11, for example;

Keyes et al. fails to suggest the use of error values in the manner set forth in, e.g., independent claim 11.

Independent Claim 11

As previously discussed, claim 11 recites:

> 11. Machine readable media having stored therein a set of instructions that when executed cause a computer to implement a process for determining a probability of an adverse event in connection with a plurality of loans, the plurality of loans having varying amounts of loan data available, the process comprising:
>
> [A] constructing a first mathematical model for use with loans for which loan data is available for a set of explanatory variables, **the set of explanatory variables including variables that relate to risk characteristics of the loan, risk characteristics of collateral for the loan,** and risk characteristics of a borrower associated with the loan;
>
> [B] **constructing a second mathematical model for use with loans for which at least some of the loan data for the set of explanatory variables is not available,** including
>
> [i] **estimating the probability of the adverse event for a first group of loans** for which the loan data is available for the set of explanatory variables **using the first mathematical model,**
>
> [ii] **iteratively estimating the probability of the adverse event for the first group of loans using the second mathematical model,**
>
> [iii] **selecting an optimal set of weighting coefficients for the second mathematical model, the optimal set of coefficients being selected so as to minimize errors in outputs generated by the second mathematical model for the first group of loans relative to outputs generated by the first mathematical model** for the first group of loans, and

> [iv] **storing a set of error values,** the set of error values relating to the errors in the outputs generated by the second mathematical when using the optimal set of coefficients **relative to the outputs generated by the first mathematical model**; and
>
> [C] **estimating the probability of the adverse event for a second group of loans** using the second mathematical model, wherein at least some loan data for the set of explanatory variables is not available for the second group of loans, and wherein estimating the probability of the adverse event for the second group of loans includes **randomly drawing error values from the set of error values and adjusting the outputs of the second mathematical model for the second group of loans in accordance with the randomly drawn error values, the randomly drawn error values causing a distribution of the probability values produced by the second mathematical model for the second group of loans to more closely match a distribution of the probability values produced by the first mathematical model for the first group of loans.**

(Applicant notes that, for sake of facilitating the present discussion only, each of the steps has been designated [A], [B][i]-[B][iv], and [C], respectively.)

In the Final Office Action, and in response to Applicant's August 25, 2009 arguments, the following assertions were made:

> 2. As for the first and second mathematical model Keyes uses different models to arrive at the values depending on the amount of information available. (*See at least Keyes abstract.* Partial sample underwriting (one model) and inferred values of the remainder (second model).) Also whether a system has one complicated mathematical model or two or more mathematical models which are combined is completely subjective. Focus on what the "two models" are doing that is novel is more likely to yield a clear concept than a focus on one model or two.
>
> 3. Keyes uses "sample underwriting" which would involve all the factors that would effect the value of the loans being underwritten.

4. As for an adverse event that is drawn to finding the proper price for a set of loans the adverse event is the amount of defaulting of the loans involved and finding the proper price to pay inherently includes pricing in those adverse events.

5. Cluster valuation and confidence are measures of error and are stored an monitored as such. (*See at least Keyes column 6 lines 31-65*)

6. The random drawing of error values is the clustering.

With regard to item 2 of the Office Action, Applicant submits that the Examiner merely indicated what he specifically interprets as allegedly reading on the claimed first and second mathematical models (relying on the same sections of Keyes et al. and reasoning) without addressing any of Applicant's relevant arguments. As such, Applicant cites to Section 707.07(f) of the MPEP which states that "[w]here the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." (emphasis added). In this instance, although the Examiner maintained and repeated the rejection of claims 11, 16, 20, and 22 under 35 U.S.C. §102(b) from the May 27, 2009 Office Action, the Examiner did not provide a substantial answer and/or rebuttal to Applicant's August 25, 2009 arguments at pages 4-6 that the Keyes et al. fails to teach each the first and second mathematical model aspects of independent claim 11. Again and as indicated above, the Examiner merely re-asserted the opinion that first and second mathematical models are disclosed in Keyes et al., and "clarified" this assertion by pointing to the partial sample underwriting and inferred values of the remainder aspects of Keyes et al. **However, while the Examiner appears to rely on the "partial sample underwriting" and "inferred values of the remainder" in Keyes et al. as corresponding to the claimed first and second models, the Examiner offers no explanation regarding how these features result in the same functionality as the claimed first and second mathematical models as recited in claim 11.** Yet, Applicant's August 25, 2009 already considered the entirety of the teachings of Keyes et al. including the partial sample underwriting and inferred values of remainder aspects described in, e.g., the Abstract and Column 1, line 53-Column 2, line 21 of Keyes et al. Therefore, Applicant

submits that the November 24, 2009 Final Office Action is improper in that it is unresponsive to Applicant's arguments and in violation of Section 707.07(f) of the MPEP.

Moreover and to the above, Applicant incorporates herein by reference in their entirety, Applicant's arguments directed to these aspects of independent claim 11. That is, Keyes et al. neither teaches nor suggests claim 11 because Keyes et al. fails to teach or suggest " constructing a first mathematical model..." **and** "constructing a second mathematical model for use with loans for which at least some of the loan data for the set of explanatory variables is not available." Hence, in the arrangement set forth in claim 11, first and second mathematical models are constructed. The second mathematical model is for use with loans for which at least some of the loan data for a set of explanatory variables is not available. As set forth in sub-steps [B][i]-[B][iv], the second mathematical model is constructed using outputs of the first mathematical model.

The Examiner relied on the Abstract and Column 1, line 53-Column 2, line 21 as alleged support for the assertion that both first and second mathematical models are taught. The Abstract of Keyes et al. indicates the following:

> A method of valuation of large groups of assets by partial full underwriting, partial sample underwriting and inferred values of the remainder using an iterative and adaptive supervised and unsupervised statistical evaluation of all assets and statistical inferences drawn from the evaluation and applied to generate the inferred values. Individual asset values are developed and listed in tables so that individual asset values can be rapidly taken from the tables and quickly grouped in any desired or prescribed manner for bidding purposes. The assets are collected into a database, divided into categories by credit variable, subdivided by ratings as to those variables and then rated individually. The assets are then regrouped according to a bidding grouping and a collective valuations established by cumulating the individual valuations.

Applicant submits that nothing in the Abstract of Keyes et al. teaches or suggests the construction of a first mathematical model or a second mathematical model as disclosed by independent claim 11 of the present application.

Column 1, line 53-Column 2, line 21 of Keyes et al. recites the following:

> In an exemplary embodiment, an iterative and adaptive approach is provided wherein a portfolio is divided into three major valuations. Full underwriting of a first type of valuation of an asset portfolio is performed based upon an adverse sample. A second valuation type is efficiently sampled from categories of common descriptive attributes, and the assets in the selective random sample are fully underwritten. The third valuation type is subjected to statistically inferred valuation using underwriting values and variances of the first and second portions and applying statistical inference to individually value each asset in the third portion. Clustering and data reduction are used in valuing the third portion.
>
> As the process proceeds and more assets are underwritten, the number of assets in the first and second portions increase and the number of assets in the third portion decreases and the variance of the valuation of the assets in the third portion becomes more and more defined. More specifically, the assets in the third portion are evaluated by grouping the assets into clusters based on similarity to valuations of assets in the first and second portions.
>
> A method for predicting value of non-underwritten assets for which data representations are partial or incomplete by projecting values onto the non-underwritten assets from at least one of fully underwritten assets, other non-underwritten assets with complete data representations and available data from non-underwritten assets with partial or incomplete data representations having similar identifiable characteristics is disclosed. The method includes the steps of sampling assets according to risk, underwriting assets and recording valuations, forming market value clusters, building regression models for underwritten assets, selecting the best models for the underwritten assets, counting a number of times the models are selected and using the selected model to make a prediction of underwriting value for the non-underwritten assets.

At best, Column 2, lines 7-21 of Keyes et al. describes a method for predicting values of non-underwritten assets for which data representations are partial or incomplete by the projection of values from at least one fully underwritten asset to the non-underwritten assets. Moreover, the

above section of Keyes et al. merely suggests that models (i.e., regression models) are constructed for the underwritten assets, where such regression models are selected to make predictions of underwriting value for the non-underwritten assets.

Specifically with regard to partial sample underwriting and inferred remainder values, Keyes et al. at Column 5, lines 12-27 describes merely randomly sampling groups of assets within some cluster (partial sample underwriting) as opposed to "full sample underwriting" which involves 100% sampling of the sample groups in asset categories. Keyes et al. at the Abstract clearly indicates that the inferred values "are generated," and thus are merely resulting values, not any sort of mathematical model that can be used/constructed relative to a first mathematical model for determining the probability of an adverse event as explicitly recited in independent claim 11.

In light of the above, Applicant again submits that at best, Keyes et al. only teaches the construction of a first mathematical model. Those non-underwritten assets for which data representations are partial or incomplete have no such "second mathematical model" constructed for estimating the probability of adverse events therewith.

Furthermore, Applicant reminds the Examiner that under 35 U.S.C. §102, a claim is anticipated, i.e., rendered not novel, when a prior art reference discloses every limitation of the claim. In re Schreiber, 128 F.3rd 1473, 1477 (Fed. Cir. 1997). "Rejections under 35 U.S.C. § 102[] are proper only when the claimed subject matter is **identically** disclosed or described in the prior art." In re Arkley, Eardley, and Long, 172 U.S.P.Q. 524, 526 (CCPA 1972) (*emphasis added*). Recently, in Net Moneyln, Inc. v. VeriSign, Inc., the Federal Circuit held that the test for anticipation by a single reference under 35 U.S.C. § 102 requires that a single reference not only disclose all elements of the invention, **but that all the elements be arranged or combined in the same way as in the claim**. No. 2007-1565 ((Fed. Cir. 10/20/2008) (Fed. Cir., 2008)).

At page 3 of the May 27, 2009 Office Action and at page 3 of the November 24, 2009 Office Action, the Examiner merely quoted the relevant claim language of, e.g., independent claim 11 of the present application, and cited to Abstract and Column 1, line 53-Column 2, line 21 as alleged evidence of a teaching of first and second mathematical models. These sections of Keyes et al. fail to contain any actual mention of such first and second mathematical models constructed in the manner disclosed in independent claim 11, and Applicant can find no way that the disclosure of Keyes et al. could be interpreted as anticipating such limitations. Thus, Applicant submits that unless the Examiner can identify/explain how a "partial sample underwriting" and "inferred values of the remainder" read on the claimed first and second mathematical models constructed in the manner disclosed in claim 11 and/or rebut Applicant's above interpretation of Keyes et al., the rejection cannot stand.

Furthermore and again with regard to the "regression model" recited in Keyes et al., Applicant submits that it appears that Keyes et al. is contemplative of some type of "model" given the use of the actual term "model." However, with respect to the regression model described by Keyes et al., it is clear at, e.g., Column 2, lines 14-21, that a single "selected model" is chosen and utilized to make some prediction. Thus, the use of models in Keyes et al. still fails to read on the claimed first and second mathematical models recited in independent claim 11 of the present application.

Moreover, it would appear that Keyes et al. distinctly distinguishes between what it considers to be a "model" and what the Examiner asserted/interpreted to be models, i.e., "partial sample underwriting" and "inferred values of the remainder." Therefore, Applicant submits that the Examiner's interpretation of Keyes et al. fails to comply with the explicit disclosure of Keyes et al., and thus again, "partial sample underwriting" and "inferred values of the remainder" as described in Keyes et al. fails to read on the first and second mathematical models disclosed in independent claim 11 of the present application. Further still and again, even if the "partial sample underwriting" of Keyes et al. could be interpreted to be a first mathematical model, Keyes

et al. fails to teach or suggest any type of second mathematical model constructed in the manner recited in independent claim 11 of the present application.

As to the further assertions regarding the claimed first and second mathematical models being a matter of subjective interpretation and what the alleged "focus" should be, i.e., the function thereof, Applicant submits that because of the claimed manner in which the first and second mathematical models are constructed, such aspects cannot merely be dismissed as being subjective. To wit and again, the above-cited case law indicates that the claimed subject matter must be identically disclosed or described, and that all the elements must be arranged or combined in the same way as in the claim at issue. **Moreover and again, if the Examiner wishes to maintain the current position, Applicant respectfully requests that the Examiner explicitly describe how the "partial sample underwriting" and "inferred values of the remainder" as described in Keyes et al. result in the same functionality as the claimed first and second mathematical models as recited in claim 11.** Additionally and further to the above, Applicant submits that, e.g., paragraphs [0006]-[0011] of the present application, describe shortcomings in the prior art, and that it would be desirable to, e.g., evaluate/characterize the performance of a group of loans relative to the performance of another group of loans with differing explanatory variables – hence the need for the first and second mathematical models and the claimed method of their construction, as well as their function/use in determining the probability of an adverse event as discussed in greater detail below.

As to item 3 of the Office Action and as noted above, the Examiner merely asserted that by virtue of "sample underwriting" as disclosed in Keyes et al., the claimed construction of a first mathematical model for a set of explanatory variables including those that relate to: (1) risk characteristics of the loan; (2) risk characteristics of collateral for the loan; and (3) risk characteristics of a borrower associated with the loan is known. Applicant emphatically disagrees with this position. As described above, sample underwriting per Keyes et al. merely relates to the number/percentage of sample groups that are sampled, and fails to suggest anything beyond such a process. Additionally, as previously discussed by Applicant, Column 3, lines 48-

57 of Keyes et al. clearly only contemplate "borrower" risk assessment in the context of credit reports of the borrower. Further still, Column 4, lines 24-62 of Keyes et al. describes in greater detail, what is referred to (in Keyes et al.) by the term "underwriting," which encompasses, e.g., partial sample underwriting, and again clearly only contemplates borrower risk. Nothing in Keyes et al. suggests either explicitly or implicitly, the consideration of more than just borrower risk.

Moreover, paragraph [0004] of the present application describes the conventional use of borrower credit scores to assess loan risk, while paragraph [0005] of the present application identifies other factors that may be used to assess loan risk. Hence, at paragraph [0007] of the present application, it is stated that "there is a need to provide a comprehensive summary of many risk factors observed at loan acquisition combining the risk characteristics of borrow, property, loan, and other factors." Thus, Applicant submits that at best, Keyes et al. would be indicative of the above-described conventional state of underwriting (relying only on borrower risk characteristics) that various embodiments disclosed and claimed in the present application seek to improve upon.

Therefore and again, in light of the above, Applicant submits that Keyes et al. fails to teach or suggest variables that relate to risk characteristics of the loan, as well as risk characteristics of collateral for the loan, let alone the construction of a first mathematical model including such variables. **If the Examiner wishes to maintain the current position, Applicant respectfully requests that the Examiner explicitly describe how the "sample underwriting" as described in Keyes et al. necessarily suggests construction of a first mathematical model for a set of explanatory variables including those that relate to (1) risk characteristics of the loan and (2) risk characteristics of collateral for the loan, in addition to known risk characteristics of a borrower associated with the loan as recited in claim 11.**

Regarding item 4 of the Office Action, and in response to Applicant's arguments that Keyes et al. does not suggest the specific steps for creating the second mathematical model based on outputs of the first mathematical model as recited in, e.g., independent claim 11, the Examiner

merely asserted that an adverse event is the amount of defaulting of loans and finding a proper price that inherently includes pricing in those adverse events. Applicant disagrees.

First, Applicant submits that nowhere in Keyes et al. is any type of adverse event discussed, let alone an adverse event that allegedly refers to some amount of defaulting and pricing related thereto. Hence, even if arguendo, there is some inherent inclusion of pricing in an adverse event, Keyes et al. fails to teach an adverse event, and thus fails to read on this aspect of independent claim 11 of the present application.

Second, it appears from the language of item 4 of the Office Action, that the Examiner has asserted that some aspect of Keyes et al. reads on independent claim 11 because it inherently discloses some determination of a "proper price for a set of loans." However, Applicant submits that nothing in the relevant limitations of independent claim 11 of the present application are directed to finding proper pricing. Again, and as discussed in Applicant's August 25, 2009 Reply, Keyes et al. does not teach or suggest claim 11 because Keyes et al. does not suggest the specific steps for creating the second mathematical model based on the outputs of the first mathematical model as recited in claim 11. Specifically, claim 11 recites "estimating the probability of the adverse event for a first group of loans for which the loan data is available for the set of explanatory variables using the first mathematical model," "iteratively estimating the probability of the adverse event for the first group of loans using the second mathematical model," "selecting an optimal set of weighting coefficients for the second mathematical model, the optimal set of coefficients being selected so as to minimize errors in outputs generated by the second mathematical model for the first group of loans relative to outputs generated by the first mathematical model for the first group of loans," and "storing a set of error values, the set of error values relating to the errors in the outputs generated by the second mathematical when using the optimal set of coefficients relative to the outputs generated by the first mathematical model." Therefore, even if, for the sake of argument, the assertions in the Office Action regarding "adverse events" somehow had merit, Applicant submits that Keyes et al. would still

fail to read on claim 11 because claim 11 is not directed to "pricing" anything. Again, claim 11 is directed to the determination of a probability of an adverse event.

Third, Applicant again submits that the Office Action is improper for failing to substantially answer or rebut Applicant's arguments presented in the August 25, 2009 Reply in violation of Section 707.07(f) of the MPEP. To wit, item 4 (discussed above) and item 5 (asserting that cluster valuation and confidence are error measures that are stored) of the Office Action, fail to completely rebut or answer Applicant's arguments. That is, and again, Keyes et al. fails to teach or suggest "estimating the probability of the adverse event for a first group of loans for which the loan data is available for the set of explanatory variables using the first mathematical model," "iteratively estimating the probability of the adverse event for the first group of loans using the second mathematical model," "selecting an optimal set of weighting coefficients for the second mathematical model, the optimal set of coefficients being selected so as to minimize errors in outputs generated by the second mathematical model for the first group of loans relative to outputs generated by the first mathematical model for the first group of loans," and "storing a set of error values, the set of error values relating to the errors in the outputs generated by the second mathematical when using the optimal set of coefficients relative to the outputs generated by the first mathematical model." **The Office Action does not specifically address each and every one of these limitations of claim 11.**

Therefore, Applicant incorporates herein by reference in their entirety, the arguments directed to the construction of a second mathematical model as set forth in Applicant's August 25, 2009 Reply. That is, Column 1, lines 60-65 and Column 2, lines 14-32 of Keyes et al. have been quoted above, and Applicant submits that nowhere in these sections of Keyes et al. can any description of estimating the probability of an adverse event be found. At best, Keyes et al. merely describes the valuation of underwritten assets and the predictive valuation of non-underwritten assets. However, none of the valuation described in Keyes et al. can be reasonably interpreted as having any relation to the probability of an adverse event occurring for a group of loans.

Column 6, lines 11-65 of Keyes et al. recites the following:

> Organizing valuation scores is performed by collating, in electronic form, a cluster number, a cluster name, descriptive attributes of the cluster(s), probabilistic recovery values (an illustrative example is a HELTR score) and the underwriter's confidence in each cluster's valuation based upon the strengths of each cluster's descriptive attributes. The cluster number is a unique identifier of a specific set of descriptive attributes that are facts about an asset which a person skilled in evaluations uses to assess value of an asset. Examples of descriptive attributes include, but are not limited to, payment status, asset type, borrower's credit worthiness expressed as a score, location and seniority of a claim. The cluster name is, in one embodiment, an alpha-numeric name that describes the cluster's descriptive attributes or sources. One example of descriptive attributes is found in FIG. 12, described below.
>
> Descriptive attributes are the facts or dimensions or vectors that were used to develop the asset's value. Computer logic is used to check for replicated clusters, if any, and alert the analysts or underwriters.
>
> Because each asset can be described by many combinations of descriptive attributes, various levels of value for the same asset may occur. Probabilistic recovery values or credit score or any numerical indication of the asset's worth are indicators of worth designated at the discrete asset level. All of the information from the various descriptive attributes is synthesized such that a purchase or sale price can be ascertained as a fixed value or a probabilistic one. An illustrative embodiment used herein is the HELTR score. Each cluster has a unique set of descriptive attributes and designated HELTR score.
>
> Every cluster's unique attributes contribute to a valuation of cluster value. Different combinations of attributes provide a higher confidence or confidence interval of a particular cluster's score. For example, if any asset was described as a green piece of paper with height equal to 2.5" and width equal to 5"--one might ascribe a value of 0 to 1000 dollars and place very little confidence in this assessment. If this same asset was described with one more fact or attribute or vector as being a real $20 US bill, one would place a very high confidence factor on this cluster value of $20 US dollars.

> A cluster's valuation and confidence is determined at a point in time and recorded. Sometimes new information becomes available and the analyst would like to alter the value(s). The value is altered manually or automatically with a data field and decision rules, in the automated fashion via computer code. The prior values are manipulated to reflect new information. As an illustrative example, assume the prior cluster confidence was recorded at 0.1 and it is learned that a different asset with exact descriptive attributes as in this cluster just sold for over the predicted "most probable" value. Rules were in effect such that if this event occurred, cluster confidence is multiplied by 10. 0.1.times.10=1 which is the revised cluster confidence.

Applicant again submits that nowhere in the above-quoted section of Keyes et al. can any mention of the following features be found: iterative estimation of the probability of an adverse event; selection of "an optimal" set of weighting coefficients "to minimize errors in outputs generated by the second mathematical model; or storing a set of error values, where the set of error values relates to the errors in the outputs generated by the second mathematical model when using the optimal set of coefficients relative to the outputs generated by the first mathematical model. At best, Keyes et al. describes organizing valuation scores through the use of clusters that have certain descriptive attributes used to develop an asset's value, where confidence levels are assigned to clusters. As described at, e.g., Column 6, lines 42-65, the confidence levels may be interpreted to be some type of "weighting," but certainly **not** "weighting coefficients for the second mathematical model, the optimal set of coefficients being selected so as to minimize errors in outputs generated by the second mathematical model for the first group of loans relative to outputs generated by the first mathematical model for the first group of loans." Moreover, Applicant submits that Keyes et al. is devoid of any description of "error values," let alone error values that are stored and indicative of errors as described in claim 11.

Therefore and again, in light of the above, Applicant submits that Keyes et al. fails to teach or suggest constructing a second mathematical model in the manner disclosed in independent claim 11 of the present application, and therefore cannot anticipate claim 11. **In the**

event that the rejection is maintained, Applicant respectfully requests that the Examiner explicitly describe how/where Keyes et al. suggests the following limitations required in claim 11: "estimating the probability of the adverse event for a first group of loans for which the loan data is available for the set of explanatory variables using the first mathematical model," "iteratively estimating the probability of the adverse event for the first group of loans using the second mathematical model," "selecting an optimal set of weighting coefficients for the second mathematical model, the optimal set of coefficients being selected so as to minimize errors in outputs generated by the second mathematical model for the first group of loans relative to outputs generated by the first mathematical model for the first group of loans," and "storing a set of error values, the set of error values relating to the errors in the outputs generated by the second mathematical when using the optimal set of coefficients relative to the outputs generated by the first mathematical model."

Finally and with regard to item 6, the Examiner asserted that "random drawing of error values is the clustering." Applicant presumes that this assertion was made in light of the "randomly drawing error values" feature disclosed in the last limitation of independent claim 11.

First, and as discussed above, Column 3, lines 48-67 of Keyes et al. describes "clustering" as some grouping of assets that may be further grouped into, e.g., tranches, where the asset groups are sample underwritten, for example. Furthermore, Keyes et al. describes that such groupings maybe randomly sampled. However, because Keyes et al. fails to make any suggestion that the act of clustering is in any way associated with error values, Keyes et al. cannot be reasonably interpreted to read on the claimed random drawing of error values. Moreover, Applicant submits that contrary to the Examiner's assertions, the claimed random drawing of error values cannot be "the clustering," because the "clusters" are generated after the process of clustering, and the random selection of clusters occurs after "the clustering."

Second and again, Applicant submits that Section 707.07(f) of the MPEP has been violated because the Examiner, while attempting to address the claimed random drawing of error

values, completely ignores the remaining features of independent claim 11. Therefore, and yet again, Applicant incorporates herein by reference in their entirety, Applicant's August 25, 2009 arguments directed to process of estimating the probability of the adverse even for a second group of loans using the second mathematical model.

That is, claim 11 not only requires randomly drawing error values, but specifically "**estimating the probability of the adverse event for the second group of loans** includes randomly drawing error values from the set of error values and **adjusting the outputs of the second mathematical model for the second group of loans in accordance with the randomly drawn error values**, the randomly drawn error values **causing a distribution of the probability values produced by the second mathematical model for the second group of loans to more closely match a distribution of the probability values produced by the first mathematical model for the first group of loans.**" **The Office Action does not specifically address each and every one of these limitations of claim 11.**

Hence and further to the above, in claim 11, the error values are used to cause the distribution of the probability values produced by the second mathematical model for the second group of loans to more closely match a distribution of the probability values produced by the first mathematical model for the first group of loans.

The Examiner relied upon Column 6, lines 4-10 of Keyes et al. to support the Examiner's position that each of the above-described limitations is anticipated. Column 6, lines 4-10 of Keyes et al. merely indicates that:

> One exemplary method first organizes valuation scores (static and/or probabilistic recoveries) in a computerized system. Adjustments are then made to the valuation scores for special factors and business decisions. Then a reconciliation of multiple valuation scores describing the same asset and an overall adjustment to interview/override the inferred valuation is performed.

As is clear, Keyes et al. merely describes, in a general sense, the organization of valuation scores and adjusting the scores to reconcile/adjust certain valuation scores. Nowhere in this section of Keyes et al. is the random drawing of error values suggested, let alone (and again) estimating the probability of an adverse event. Moreover, it is also clear from the above, that Keyes et al. is directed to reconciling scores "for the same asset," not for matching a distribution of probability values produced by the second mathematical model for a second group of loans and that of a first group of loans. **Hence, if the Examiner wishes to maintain the current position, Applicant respectfully requests that the Examiner describe with specificity, how the "clustering" and "valuation" as disclosed in Keyes et al. result in the same functionality as the claimed "estimating the probability of the adverse event for the second group of loans" which "includes randomly drawing error values from the set of error values and adjusting the outputs of the second mathematical model for the second group of loans in accordance with the randomly drawn error values, the randomly drawn error values causing a distribution of the probability values produced by the second mathematical model for the second group of loans to more closely match a distribution of the probability values produced by the first mathematical model for the first group of loans" as recited in claim 11.**

Independent Claim 20

Independent claim 20 recites "estimating a second set of weighting coefficients for a second mathematical model by performing a second regression operation, the second model being a function of only a subset of the predetermined loan parameters and the second set of weighting coefficients, the second set of weighting coefficients being associated with respective ones of the subset of the predetermined set of loan parameters, the second regression operation causing the second mathematical model to produce a probability distribution which is in overall alignment with a probability distribution produced by the first mathematical."

Applicant again submits that for at least the same reasons described above with regard to claim 11, Keyes et al. fails to suggest estimating a second set of weighting coefficients for a second mathematical model by performing a second regression operation which causes the second mathematical model to produce a probability distribution which is in overall alignment with a probability distribution produced by the first mathematical in the manner set forth in claim 20.

Likewise, independent claim 20 recites "determining the probability of the adverse event using the second mathematical model in connection with a second plurality of loans, including randomly drawing error values from the set of error values and adjusting the outputs of the second mathematical model for the second plurality of loans in accordance with the randomly drawn error values, the randomly drawn error values causing a distribution of the probability values produced by the second mathematical model for the second plurality of loans to more closely match a distribution of the probability values produced by the first mathematical model for the first group of loans." Again, and for at least the same reasons as previously discussed with regard to claim 11, Applicant submits that Keyes et al. fails to teach or suggest using error values in the manner set forth in claim 20. **Moreover and again, the Office Action does not specifically address these limitations of claim 20. In the event that the rejection is maintained, clarification (as indicated above with regard to claim 11) is also respectfully requested.**

II. Conclusion

Because none of the references cited by the Examiner, either separately or in combination with each other, teach all of the required limitations of independent claims 11 and 20, Applicant submits that each of the these independent claims are patentable over this prior art. Furthermore, because dependent claims 12-16 and 21-23 are each directly or indirectly dependent upon independent claims 11 and 20, Applicant submits that each of these claims are allowable for at least the same reasons as discussed above.

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date February 24, 2010

By 

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